Ischemic Stroke: Hospital Outcomes in California, 2011-2012

Executive Summary

Every year approximately 795,000 adult Americans suffer a stroke, and a stroke death occurs every four minutes\(^1\). Stroke is the most common cause of adult long-term disability in the United States and a life-changing event that places a heavy burden on patients, families and caregivers. This report focuses on the most common type of stroke, ishemic stroke, which occurs when an artery supplying blood to the brain becomes blocked. It does not provide information on hemorrhagic stroke, which is caused by a leaking or burst blood vessel. For ischemic strokes, timely interventions are critical to reverse the damage; reduce mortality, morbidity and disability; and improve survivor quality of life.

This report provides information on the quality of ischemic stroke care at California acute care hospitals during 2011 to 2012 and provides performance ratings for more than 270 hospitals on two outcome measures—risk-adjusted 30-day mortality and 30-day hospital readmission. The outcome measures are statistically adjusted to account for differences in patient severity of illness at different hospitals, which allows for fair comparisons across all hospitals.

This is the first report on ischemic stroke quality of care developed and produced by the Office of Statewide Health Planning and Development (OSHPD). The information is intended to help consumers make more informed healthcare decisions, help payers and employers spend their healthcare dollars more wisely, and provide hospitals performance benchmarks they can use in their review of internal processes of care and quality improvement activities.

Technical Details

Additional information about these quality measures can be found in the OSHPD Technical Note for Producing Ischemic Stroke: Hospital Outcomes in California, 2011-2012, and the Ischemic Stroke Outcomes Validation Study in California, 2006-2009.

Stroke Mortality and Readmission Results

Click the link below to access the ischemic stroke 30-day mortality and 30-day readmission ratings for all California-licensed hospitals:
Ischemic Stroke Ratings Table

Key Findings

Thirty-day Mortality Findings

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There were 70,213 ischemic stroke hospitalizations in California between January 1, 2011 and November 30, 2012. Of these, 7,406 patients died within 30 days of hospital discharge for a statewide 30-day mortality rate of 10.6%. Of these deaths, 3,601 (5.1%) occurred while the patient was in the hospital.

Of the 276 hospitals in the report, nine were rated significantly "Better" and ten were rated significantly “Worse” than the state average.

The average risk-adjusted mortality rate for the ten hospitals rated “Worse” (17.8%) was more than three times higher than the average rate for the nine hospitals rated “Better” (5.3%).

Eight out of the nine hospitals rated “Better” were located in Los Angeles County.

Thirty-day Readmission Findings

There were 66,612 ischemic stroke discharges included in the readmissions analysis (alive at discharge with valid SSNs) between January 1, 2011 and November 30, 2012. Of these, 8,527 patients were readmitted within 30 days for a statewide 30-day readmission rate of 12.8%.

Of the 274 hospitals included in the readmission analysis, 12 were rated significantly “Better” and seven were rated significantly “Worse” than the state average.

The average risk-adjusted readmission rate for the seven hospitals rated “Worse” (18.6%) was nearly three times higher than the average rate for the 12 “Better” rated hospitals (6.7%).

There was no statistically significant correlation between hospital 30-day mortality rates and readmission rates, and no hospitals performed either “Better” or “Worse” on both measures, though one hospital with a “Better” rating on mortality performed “Worse” on readmissions.

Of the 12 "Better” rated hospitals, seven were Kaiser Permanente hospitals. No other hospital system had more than one hospital rated “Better.”